<u>In the Claims</u>:

Claims 1-22 (Canceled).

Claim 23 (Currently amended). A method of identifying a maize progeny plant having a restriction fragment introgressed from a *Tripsacum*/teosinte hybrid, said method comprising the following steps:

(a) isolating the total genomic DNA from the plant;

(b) digesting said genomic DNA with one to five of the restriction enzymes selected from the group consisting of *Eco*RI, *Eco*RV, *Hind*III, *Bam*HI and *Msp*I;

(c) probing said digested genomic DNA with one or more probes, to identify one or more restriction fragments, selected from the group consisting of

BNL5.62, *Eco*RI, 10.3 kb; npi97, *Hind*III, 3.9 kb; UMC157, *Eco*RI, 6.5 kb and 3.3 kb; UMC157, *Hind*III, 5.5 kb; UMC157, *Bam*HI, 14.0 kb, 8.5 kb and 4.5 kb; UMC11, *Bam*HI, 7.0 kb; CSU3, *Bam*HI, 10.0 kb and 7.6 kb; UMC67, *Eco*RI, 19.2 kb; UMC67, *Bam*HI 13.4 kb, 11.0 kb and 1.6 kb; CSU92, *Bam*HI, 13.3 kb and 7.5 kb; asg62, *Bam*HI, 12.7 kb, 9.7 kb and 6.6 kb; UMC58, *Hind*III, 3.3 kb; CSU164, *Eco*RI, 9.0 kb and 7.0 kb; UMC128, *Hind*III, 6.0 kb; UMC107, *Eco*RI, 7.5.0 kb, 6.3 kb and 6.1 kb; UMC140, *Eco*RI, 4.9 kb; UMC140, *Hind*III, 6.5 kb; adh1, *Hind*III, 9.4 kb; adh1, *Bam*HI, 9.4 kb; UMC161, *Hind*III, 3.3 kb; BNL8.29, *Hind*III, 9.3 kb and 8.3 kb; UMC53, *Eco*RI, 9.4 kb; UMC53, *Eco*RV, *8.4 kb*, 3.8 kb and 3.0 kb; UMC6, *Eco*RI, 3.8 kb; UMC6, *Hind*III 9.4 kb; UMC6, *Bam*HI, 13.2 kb, 12.7 kb, and 7.0 kb; UMC61, *Hind*III, 3.4 and 2.8 kb *agrr167*, *Bam*HI, 5.7 kb, 4.5 kb and 4.0 kb; UMC34, *Eco*RI, 7.5 kb and 5.4 kb; UMC34, *Hind*III, 8.8 kb, 6.5 kb and 5.8 kb; UMC34, *Bam*HI, 9.4 kb; UMC135, *Hind*III, 11.6 kb and 10.8 kb; UMC131, *Eco*RI, 10.6 kb, 5.8 kb and 4.3 kb; UMC55, *Eco*RI, 3.9 kb; UMC55, *Hind*III, 4.3 kb; UMC5, *Eco*RI, 5.4 kb; UMC5, *Hind*III, 6.5 kb; UMC49, *Bam*HI, 8.2 kb; UMC36, *Bam*HI, 4.2 kb; UMC32, *Eco*RI, 5.3 kb; UMC32, *Hind*III 6.7 kb, 6.0 kb, and 2.8 kb; asg24, *Hind*III, 7.2 kb and 6.4 kb; UMC121, *Eco*RI, 3.7 kb and 3.2 kb; BNL8.35, *Hind*III, 9.9 kb and 8.7 kb; *UMC50, Bam*HI, *7.8 kb, 6.8 kb, 5.8 kb* and 3.8 kb; *UMC42, Hind*III, 10.4 kb, 9.2 kb, 8.9 kb, 7.9 kb, *7.6 kb*, and 3.7 kb; npi247, *Eco*RI, 8.0 kb; npi247, *Hind*III 3.0 kb; UMC10, *Hind*III, 3.0 kb; UMC10, *Eco*RI, 6.5 kb

and 5.5 kb; UMC102, *Eco*RI, 2.7 kb; BNL6.06, *Eco*RI, 6.8 kb; CSU240, *Eco*RI, 10.6 kb,
4.5 kb and 3.3 kb; BNL5.37, *Hind*III, 10.3 kb, 5.8 kb and 3.5 kb; npi296, *Eco*RI, 7.9 kb;
UMC3, *Eco*RI 2.5 kb and 2.0 kb; npi212, *Hind*III, 4.3 kb; npi212, *Bam*HI, 5.4 kb;
UMC39, *Eco*RI, 12.2 kb, 9.2 kb, 7.8 kb and 7.1 kb; *phi10080*, *Bam*HI, *9.7* kb; UMC63,
*Hind*III, 9.5 kb and 4.3 kb; CSU303, *Eco*RI, 10.0 kb; UMC96, *Hind*III, 11.8 kb, 6.4 kb
and 5.5 kb; UMC96, *Bam*HI, 7.5 kb; UMC2, *Eco*RI, 11.8 kb, 10.4 kb, 8.0 kb and 3.9 kb;
CSU25, *Hind*III, *5.2* kb, 4.5 and *4.2* kb; agrr115, *Eco*RI. 8.0 kb and 5.4 kb; agrr115,
*Bam*HI, 5.4 kb and 3.5 kb; phi20725, *Eco*RI, 10.3 kb, 9.7 kb and 7.2 kb; phi20725,
*Hind*III, 1.5 kb; UMC31, *Eco*RI, 5.8 kb and 2.0 kb; *UMC31*, *Bam*HI 6.5 kb; UMC55,
*Eco*RI, 3.9 kb; UMC55, *Hind*III, 4.3 kb; CSU235, *Hind*III, 6.8 kb and 3.0 kb; CSU585,
*Hind*III, 8.3 kb and 6.1 kb; BNL5.46, *Hind*III, 13.7 kb, 10.5 kb, 9.7 kb and 5.1 kb;
agrr321, *Bam*HI, 5.5 kb; *agrr89*, *Hind*III, *7.1* kb; npi386, *Hind*III, 12.6 kb, 9.3 kb and 8.2
kb; *UMC42*, *Hind*III, 19.2 kb, 10.3 kb 8.9 kb, *7.6* kb, 3.7 kb and 3.0 kb; *tda62*, *Bam*HI,
5.5 kb, 5.2 kb, 4.8 kb and *4.2* kb; BNL5.71, *Eco*RV, 11.3 kb, 6.8 kb, and 5.7 kb;
UMC156, *Hind*III, 3.0 kb; UMC66, *Eco*RI, 10.5 kb; UMC66, *Bam*HI, 3.7 kb and 2.4 kb;
UMC19, *Bam*HI, 12.3 kb; UMC104, *Hind*III, 12.4 kb, 11.6 kb and 7.5 kb; UMC104,
*Bam*HI, 9.4 kb; UMC133, *Hind*III, 10.6 kb, 9.9 kb, 9.2 kb and 7.7 kb; UMC52, *Bam*HI,
8.7 kb, 6.9 kb, 3.8 kb, 3.0 kb and 2.0 kb; BNL15.07, *Hind*III, 2.9 kb and 2.7 kb; npi409,
*Eco*RI, 9.4 kb; npi409, *Hind*III, 10.4 kb, 9.0 kb and 3.9 kb; UMC147, *Hind*III, 16.3 kb,
3.8 kb and 2.4 kb; *asg73*, *Eco*RI, *3.8* kb; UMC90, *Hind*III, 7.7 kb, 6.5 kb, 2.8 kb and 1.6
kb; UMC90, *Bam*HI, 9.0 kb; *UMC72*, *8.5* kb; UMC27, *Hind*III, 8.3 kb and 4.5 kb;
UMC27, *Bam*HI, 6.5 kb; UMC43, *Bam*HI, 9.7 kb, 7.3 kb and 5.7 kb; tda37, *Bam*HI, 9.0
kb, 8.0 kb and 6.4 kb; UMC43, *Bam*HI, 9.7 kb, 7.3 kb and 5.7 kb; UMC40, *Bam*HI, 7.2
kb, 4.7 kb and 4.3 kb; BNL7.71, *Hind*III, 10.6 kb; BNL5.71, *Bam*HI, 11.3 kb, 6.8 kb and
5.7 kb; tda62, *Bam*HI, 6.5 kb and 5.5 kb; UMC68, *Hind*III, 6.0 kb; UMC104, *Hind*III,
12.4 kb, 11.6 kb and 7.5 kb; UMC104, *Bam*HI, 9.4 kb; phi10017, *Bam*HI, 15.1 kb and
9.5 kb; tda50, *Bam*HI, 8.5 kb; npi373, *Hind*III, 6.5 kb, 5.6 kb, 5.1 kb and 3.0 kb; tda204,
*Bam*HI, 4.0 kb; *npi393*, *Eco*RI, 12.1 kb, 8.5 kb, *7.0* kb and 5.6 kb; UMC65, *Hind*III, 2.9
kb; UMC46, *Eco*RI, 6.5 kb and 5.6 kb; asg7, *Hind*III, 6.3 kb; UMC28, HindIII, 15.8 kb
and 11.9 kb; UMC28, *Bam*HI, 9.9 kb, 7.6 kb and 6.6 kb; UMC134, *Hind*III, 7.5 kb and
4.7 kb; *asg8*, *Hind*III, 10.8 kb, *8.7* kb and 8.4 kb; *phi20581*, *Hind*III, *4.2* kb; O2, *Eco*RI,

9.4 kb; asg34, *Hind*III, 4.5 kb; BNL15.40, *Hind*III, 5.8 kb; UMC116, *Eco*RI, 9.5 kb;

UMC110, *Bam*HI, 10.6 kb, 4.9 kb and *3.9* kb; BNL8.32, *Hind*III, 8.9 kb, 7.4 kb and 7.1

kb; BNL14.07, *Eco*RI, 6.4 kb; *UMC80, Hind*III, *10.7* kb, *8.2* kb and 2.4 kb; BNL16.06,

*Eco*RI, 6.8 kb and 1.9 kb; BNL16.06, *Hind*III, 5.7 kb, 3.0 kb and 1.6 kb; phi20020,

*Hind*III, 7.8 kb, 6.6 kb and 5.1 kb; npi114, *Hind*III, 10.0 kb, 8.8 kb and 6.3 kb; BNL9.11,

*Hind*III, 3.4 kb; UMC103, *Hind*III, 6.9 kb; UMC124, *Hind*III, 8.0 and 7.0; UMC124,

BamHI, 6.6 kb, 2.6 kb and 1.6 kb; UMC120, *Hind*III, 3.2 kb, 2.3 kb and 1.4 kb; UMC89,

*Eco*RI, 7.3 kb; UMC89, *Hind*III, 7.3 kb; UMC89, *Bam*HI, 9.5 kb, 6.0 kb, 5.2 kb and 4.5

kb; UMC89, *Msp*I, 6.7 kb and 5.8 kb; BNL12.30, *Eco*RI, 3.5 kb; *UMC48, Hind*III, *6.2*

kb, 5.3 kb, 4.7 kb, 4.2 kb and 3.5 kb; UMC53, *Eco*RI, 3.8 kb and 3.0 kb; *UMC53*,

*Eco*RV, 8.4 kb; npi268, *Bam*HI, 6.4 kb; *UMC7*, *Bam*HI, 4.2 kb; UMC3, *Eco*RI, 3.5 kb

and 2.0 kb; phi10005, *Eco*RI, 15.0 kb and 1.6 kb; UMC113, *Eco*RI, 5.9 kb and 5.4 kb;

UMC113, *Bam*HI, 12.8 kb, 11.8 kb and 10.5 kb; UMC192, *Hind*III, 11.4 kb and 6.4 kb;

wx (waxy), *Hind*III, 21.0 kb; UMC105, *Eco*RI, 3.9 kb; CSU147, *Hind*III 5.9 kb;

BNL5.10, *Hind*III, 6.1 kb and 4.4 kb; UMC114, *Bam*HI, 12.6 kb, 11.5 kb, 10.0 kb, 8.8

kb, 7.5 kb and 6.5 kb; UMC95, *Eco*RI, 5.6 kb; UMC95, *Hind*III, 7.7 kb, 7.3 kb, 4.8 kb,

4.5 kb 4.1 kb and 1.7 kb; UMC95, *Bam*HI, 15.0 kb and 9.0 kb; asg44, *Eco*RI, 5.3 kb;

CSU61, *Eco*RI, 8.1 kb and 4.8 kb; BNL7.57, *Bam*HI, 11.6 kb and 5.9 kb; CSU54, *Eco*RI,

14.7 kb and 12.6 kb; phi20075, *Eco*RI, 7.1 kb; npi285, *Eco*RI, 12.4 kb, 9.4 kb and 6.0 kb;

KSU5, *Eco*RI, 9.8 kb, 7.6 kb, 6.1 kb, 3.8 kb and 3.5 kb; UMC130, *Eco*RI, 13.5 kb and

7.0 kb; UMC130, *Hind*III, 4.8 kb and 3.2 kb; UMC130, *Bam*HI, 3.2 kb; UMC64, *Hind*III,

3.3 kb; UMC152, *Hind*III, 12.4 kb, 7.1 kb and 5.6 kb; phi06005, *Eco*RI, 12.8 kb;

*UMC163, Hind*III, 7.0 kb, 4.8 kb; 3.0 kb; *2.6* kb and 2.3 kb; UMC44, *Hind*III, 9.8 kb, 8.7

kb, 7.2 kb, 5.5 kb and 4.0 kb; BNL10.13, *Hind*III, 10.8 kb; npi306, *Hind*III, 7.0 kb; pmt1,

*Hind*III, 2.3 kb; pmt2, *Hind*III, 2.8 kb and 2.1 kb; *pmt5, Hind*III, 12.3 kb, 8.1 kb, *3.6* kb,

3.2 kb and 2.5 kb; tda48, *Hind*III, 8.2 kb; tda53, *Hind*III, 3.8 kb and 2.2 kb; tda168,

*Eco*RI, 3.6 kb; tda16, *Hind*III, 4.3 kb; and tda17, *Hind*III, 7.0 kb; tda250, *Bam*HI, 4.0 kb,

recited as marker-enzyme fragment size;

(d) determining the presence of one or more of the restriction fragments.

Claim 24 (Currently amended). A maize seed identified by the method according to claim 23.

Claim 25 (Currently amended). A maize plant, all derivatives, subsequent generations, variants, mutants, modifications, and cellular and molecular components identified according to the method of claim 23 or produced from the seed according to claim 24.

Claim 26 (Currently amended). The pollen from a plant identified according to the method of claim 23 or according to claim 25.

Claim 27 (Currently amended). The tissue cultures, all derivatives, variants, mutants, modifications, and cellular and molecular components from the plant identified according to the method of claim 23 or according to claim 25.

Claim 28 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant has improved grain quality.

Claim 29 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is tolerant of acid soils.

Claim 30 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is resistant to aflatoxin.

Claim 31 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is resistant to corn borer.

Claim 32 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby the roots of said plant contain aerenchyma.

Claim 33 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant tolerates saturated soils.

Claim 34 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is resistant to aluminum toxicity.

Claim 35 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is drought tolerant.

Claim 36 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 further comprising a novel band identified by SSR probe phi123, SSR probe bnlg2235, SSR probe bnlg1714, SSR probe bnlg1805, or SSR probe dupSSR23, thereof.

Claim 37 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant has tolerance to low nitrogen.

Claim 38 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant exhibits apomixis.

Claim 39 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant is cold tolerant.

Claim 40 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant has improved forage quality.

Claim 41 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant has more extensive, robust roots.

Claim 42 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant exhibits totipotency.

Claim 43 (Currently amended). The plant identified according to the method of claim 23 or according to claim 25 whereby said plant exhibits perennialism.